

157414

Work Order ID 157414

157414

Page 1

Item ID: D3883-2

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Saddle, Outside RH

Start Date: 3/7/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 3/13/2017 Req'd Qty: 4.00

4

Customer:

Reference: 10-3-2017

24-3-2017

Approvals: Process Plan:

DAS

21

Date: MAR 07 2017

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3883

D

100

0.18

100

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.44

HAAS CNC vertical machine #1

Program Batch No. 157414

Double check by: mgt

1-Machine Step No 1 per Folio FA817 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA817 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA817 and inspect per Dimension Sheets

DAS

45

9-89

2017-3-20

DAS

44

9-89

17-03-21

110

110

QC

Quality Control

QC2

QC Inspection performed by CMM

0.00

Memo

0.01

Inspect on CMM as per folio CMM A013.

DWG REV: _____

CMM PROG. REV: _____

DAS

44

9-89

17-3-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
3AQ 20 08-0									

Root Cause			FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :				
Misidentified ☐	Past Due ☐					

Tuesday, February 21, 2017 1:23:20 PM

157414

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Saddle, Outside RH

Start Date: 3/7/2017 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 3/13/2017 **Req'd Qty:** 4.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

Reject
QtyReject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.01

Quality Control

130

Chemical Conversion Coat per QSI005 4.1

0.00

130

HandFinish

Memo

0.08

Hand Finishing

8 0 49
9-80
17/03/20



 _____ 20120321
 BEB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 157414

Tuesday, February 21, 2017 1:23:20 PM

157414

Page 3

Item ID: D3883-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle, Outside RH
Start Date: 3/7/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/13/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
140									
Powdercoat	Memo <i>in 136657.</i>	0.02							
Powder Coating	***MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT AS PER INDICATED ON DWG (SEE NOTE 2)*** ***DO NOT MASK INSIDE FLANGE SURFACE*** START TIME: <i>2:05</i> OVEN TEMPERATURE: <i>320°</i> FINISH TIME: <i>3:05</i>								
150	QC3- Inspect Part Finish	0.00							
150									
QC	Memo	0.01							
Quality Control									

8 *φ* *17-03-29* *3:38*

8 *DAS* *38* *8:00* *MAR 30 2017*

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Work Order ID 157414***157414***

Page 4

Tuesday, February 21, 2017 1:23:20 PM

Item ID: D3883-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle, Outside RH
Start Date: 3/7/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/13/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: ST401	0.00				8	DAS 6 9-89	MAR 30 2017	
160									
Packaging	Memo	0.01							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.07							
Quality Control									

17/4/3 **MF**
17-3-31

Picklist Print

Tuesday, February 21, 2017 1:23:23 PM

Page 1

Work Order ID: 157414

157414

Parent Item: D3883-2

D3883-2

Parent Item Name: Saddle, Outside RH

Start Date: 3/7/2017

Required Date: 3/13/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP RevA: New issue DD verified by:EC

IPP REV:B

15.05.20 remove inside powdercoat DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-015		Manufactured	No			100	Each	37.0000	1	4			

D6101-015

Saddle Billet

Location

Loc Qty

Loc Code

MAT045

37

153297

7

153937

10

155442

20

3
25
8

DAS
45 2017-03-18
9-89

DART AEROSPACE LTD		Work Order:	157414
Description: Saddle, Outboard, RH		Part Number:	D3883-2
Inspection Dwg: D3883	Rev. D	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658		.646	.646	.645	.645		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		.258	.258	.258	.258		
F	0.605	0.625		.616	.615	.615	.615		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.000	2.000	2.000	2.000		
J	0.140	0.165		.146	.147	.146	.147		
K	0.240	0.260		.247	.247	.247	.247		
L	0.115	0.135		.125	.125	.125	.125		
M	0.140	0.165		.146	.148	.147	.147		
N	0.720	0.780		.775	.775	.775	.775		
O	0.240	0.260		.251	.250	.251	.251		
P	0.110	0.140		.135	.135	.135	.135		
Q	0.178	0.198		.188	.188	.188	.188		
R	2.825	2.885		2.859	2.859	2.859	2.859		
S	0.316	0.321		.316	.316	.316	.316		
T	0.990	1.010		1.000	1.001	1.000	1.000		
U	1.745	1.755		1.750	1.750	1.750	1.750		
V	5.990	6.010		6.001	6.001	6.001	6.000		
W	1.245	1.255		1.250	1.250	1.250	1.250		
X	0.490	0.510		.500	.501	.500	.500		
Y	1.220	1.280		1.250	1.250	1.250	1.250		
Z	2.495	2.505		2.500	2.500	2.500	2.500		
AA	0.313	0.318		.314	.314	.314	.314		
AB	0.020	0.040		.030	.030	.030	.030		
AC	0.760	0.765		.760	.760	.760	.760		
AD	0.215	0.220		.219	.219	.219	.219		
AE	1.265	1.285		1.265	1.265	1.265	1.265		
AF									
Accept/Reject									

Measured by: ^{DAS} 44	Audited by: ^{DAS} 49
Date: 17-03-21	Date: 9-89 17/03/26

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	JLM
B	09.11.25	Dimension AE added	KJ	
C	15.06.22	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order: 157414	
Description: Saddle, Outboard, RH		Part Number: D3883-2	
Inspection Dwg: D3883 Rev. D		Page 1 of 1	

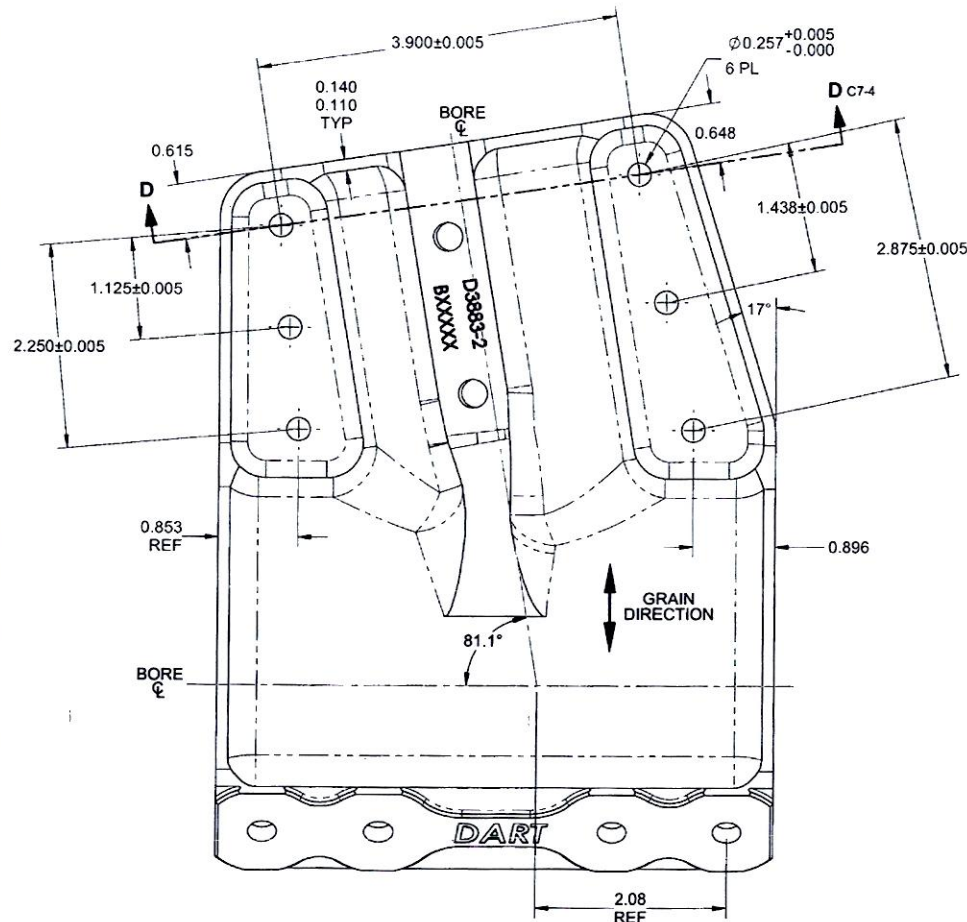
Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				5	6	7	8		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658		.646	.646	.645	.645		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		.258	.258	.258	.258		
F	0.605	0.625		.615	.615	.615	.615		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.000	2.000	2.000	2.000		
J	0.140	0.165		.147	.146	.147	.147		
K	0.240	0.260		.247	.248	.247	.247		
L	0.115	0.135		.125	.125	.125	.125		
M	0.140	0.165		.146	.148	.148	.148		
N	0.720	0.780		.775	.775	.775	.775		
O	0.240	0.260		.250	.250	.250	.250		
P	0.110	0.140		.135	.135	.135	.135		
Q	0.178	0.198		.188	.188	.188	.188		
R	2.825	2.885		2.858	2.859	2.859	2.859		
S	0.316	0.321		.316	.316	.316	.316		
T	0.990	1.010		1.000	1.000	1.001	1.000		
U	1.745	1.755		1.750	1.750	1.750	1.750		
V	5.990	6.010		6.001	6.001	6.001	6.001		
W	1.245	1.255		1.250	1.250	1.250	1.250		
X	0.490	0.510		.501	.500	.501	.501		
Y	1.220	1.280		1.250	1.250	1.250	1.250		
Z	2.495	2.505		2.500	2.500	2.500	2.500		
AA	0.313	0.318		.314	.314	.314	.314		
AB	0.020	0.040		.030	.030	.030	.030		
AC	0.760	0.765		.760	.760	.760	.760		
AD	0.215	0.220		.219	.219	.219	.219		
AE	1.265	1.285		1.265	1.265	1.265	1.265		
AF									
Accept/Reject									

Measured by:	9-89
Date:	17-03-22

Audited by:	DAS
Date:	49 17/03/26

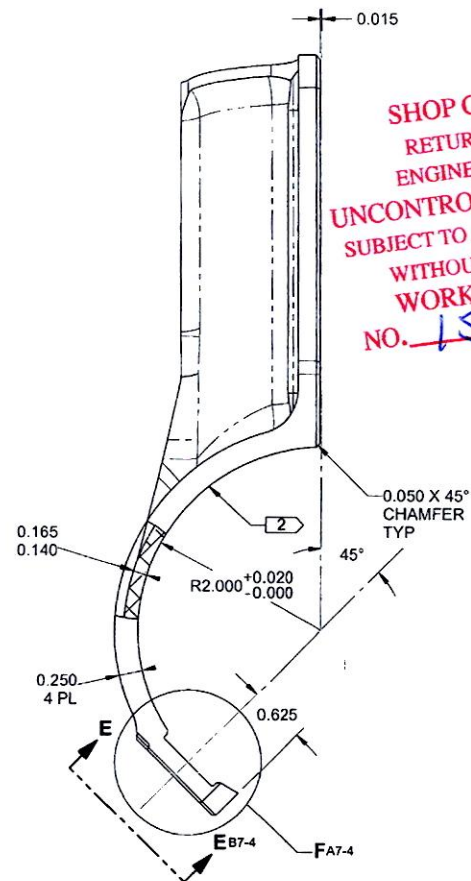
Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	JLM
B	09.11.25	Dimension AE added	KJ	
C	15.06.22	Dwg Rev updated	KJ	



D3883-2 SADDLE, OUTBOARD RH

NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM PER AMS-QQ-A-250/12, OR QQ-A-250/12 OR ASTM B209 (REF DART SPEC. D6101-015)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 1.03 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD R0.250
- 9) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D3883-2-REV.D.SLDPRT"

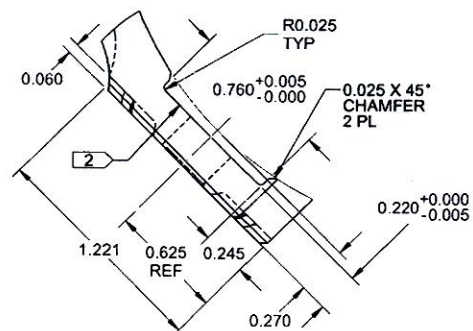
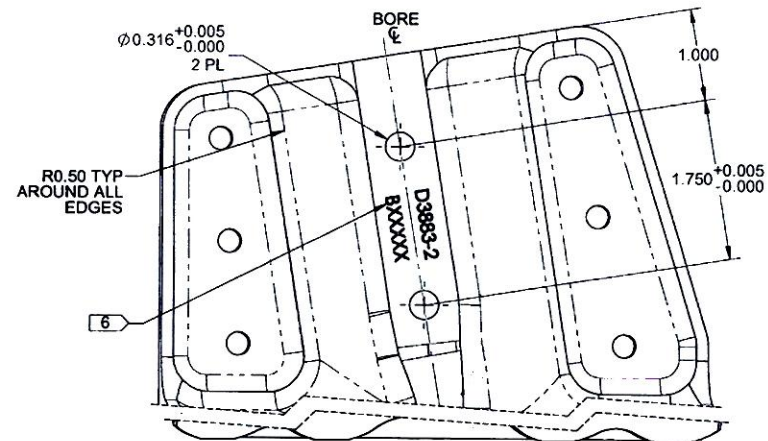
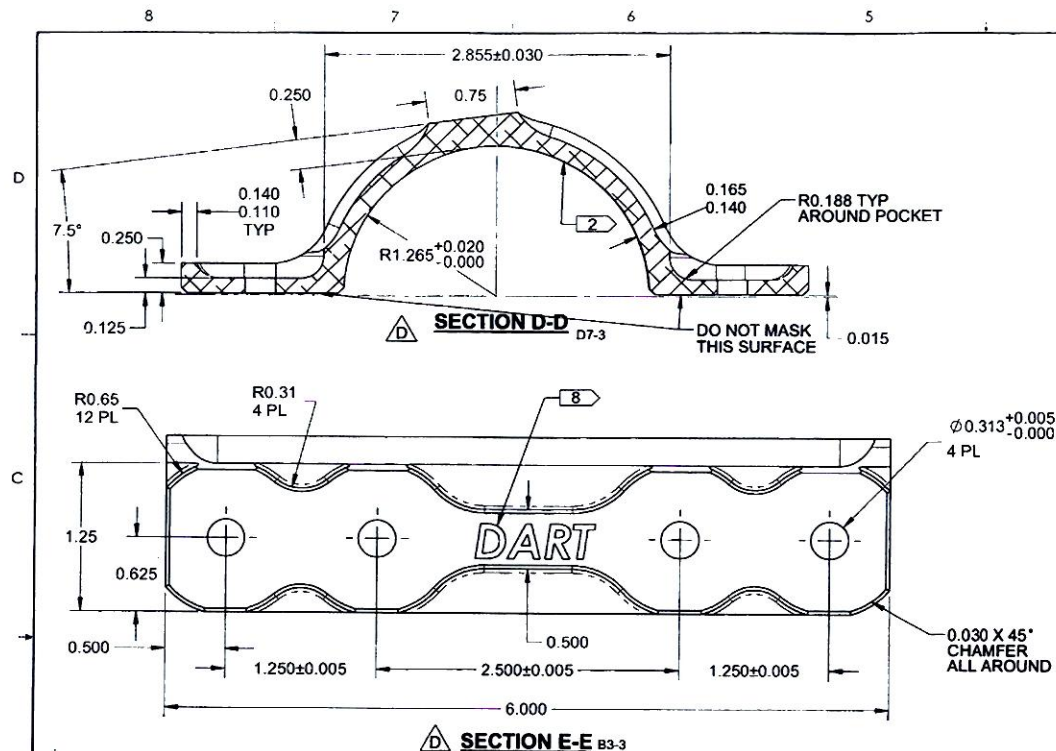


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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 157414 MJS
1703-07

RELEASED
APR 2015 MAY 19

APPROVED

DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. D
MFG. APPR.	JLM	D3883	SHEET 3 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	OUTBOARD SADDLE	NTS
DATE	15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



RELEASED
A8-2015 MAY 19

APPROVED	DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. D
	MFG. APPR.	JLM	D3883	SHEET 4 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	OUTBOARD SADDLE	NTS
	DATE	15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	